27 April 2021

Marlene H. Dortch, Secretary
Office of the Secretary
Federal Communications Commission
45 L Street NE
Washington, DC 20554

Re: Notice of Inquiry, GN Docket No. 21-63

The IEEE Standards Association is pleased to submit comments to the US Federal Communications Commission Notice of Inquiry in the matter of Promoting the Deployment of 5G Open Radio Access Networks, GN Docket No. 21-63.

We acknowledge the FCC for its efforts to gain input on Open Radio Access Networks (Open RAN) and various dimensions of its deployment and appreciate the opportunity to contribute. Further, as the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity and a globally recognized standards developing organization (SDO) grounded in an open, inclusive, transparent, and consensus-building process, we appreciate that the FCC is starting a formal discussion on the opportunities and potential challenges presented by open and virtualized radio access networks through this NOI.

About the IEEE SA
The IEEE Standards Association (IEEE SA) is a globally recognized standards-setting body within IEEE. We develop consensus standards through an open process that engages industry and brings together a broad stakeholder community. IEEE standards set specifications and best practices based on current scientific and technological knowledge. IEEE SA has a portfolio of over 1,500 active standards and over 650 standards under development. As a collaborative body, we liaise and coordinate with many standards organizations from around the world, including international, regional, and national standards bodies, as well as with industry organizations.

IEEE Standards Association

IEEE SA Comments

Standardization provides the foundation on which technology innovation is based. It enables more complex solutions to be developed at a better cost structure and drives technological innovation, while fueling the growth of global markets, expanding consumer choice, supporting interoperability and helping to protect the health and public safety of workers and the general public. As it explores the current status of development and deployment of open and virtualized RAN, we encourage the FCC to consider market-driven, consensus-based standards, developed through processes that adhere to the core principles of due process, openness, consensus, balance, and the right of appeal. This type of standards development fosters the success of these technologies and supports competitiveness and new entrant access to this emerging market. Standards developed this way, by standards development bodies such as IEEE, are global, voluntarily adopted, and serve as building blocks for products and services targeted at meeting the needs of the market and consumer.

Standards will have a key role in addressing Open RAN challenges, such as achieving widespread adoption and technical support and system integration issues. Similarly, open source will have an important role, notably at its intersection with standards as many open source projects implement open standards. Open standards need implementations to provide confirmation of their suitability (market presence) and feedback from implementers and users, and open source development projects need guidance and direction regarding their interfaces for interoperability and portability.

In addition to its platform for the development of market-relevant open standards, IEEE also provides an open source platform for standards development that is aligned with its transparent governance model, and that bridges the gap between global standards development and open source developer communities. This helps to accelerate the development and adoption of technical solutions. It provides a single development environment that is continuously supported and upgraded, has a requirement for a documented governance structure, project leadership, and decision processes, and offers that ability to make open source either a normative or informative part of a standard.

The combination of technical standards developed under the rigor of the IEEE standards development process and a governance-based and transparent IEEE SA Open source platform provides a uniquely positioned ecosystem in which to pursue standards setting and open source for Open RAN that can help enable deployment of Open RAN networks broadly and at scale.

From IEEE's 400,000+ members, the IEEE SA is convening Open RAN experts from around the globe to contribute to an ongoing dialogue on Open RAN and what the Open RAN community may need in terms of standards and open source.

IEEE SA's Standards Development Principles:

- **Direct participation**. There are no intermediaries between the owner of a promising idea and the group of peers deciding the beginning of a best practice or standard, and where any individual or organization has the ability to submit a proposal.

- **Focus on process, not individual actors.** Decisions are made with equity and fairness among all participants in a transparent manner and no party dominates or guides the process.

- **Broad consensus.** All viewpoints are considered and addressed with decisions made by either a majority or supermajority of participants and where no individual or organization wields undue power in the creation of a standard.

- **Stakeholder Balance.** Balance where steps are taken to provide an opportunity for a multitude of stakeholders to participate, ensuring that the process is not dominated by a particular individual, organization, or interest group.

- **Transparency.** Processes and procedures under which the standards are developed are broadly available so that participants understand the rules guiding engagement and decisions. Records of decisions and the supporting materials used in reaching those decisions are easily accessible.

- **Global outreach to potential stakeholders.** From the beginning of the process, appropriate notification is given to a global audience and to all potential stakeholders regarding the opportunity to engage.

- **Broad coordination for coherence.** Public comment periods are provided prior to final approval and adoption of all standards. Coherence where IEEE coordinates with industry, governments, associations, and numerous other organizations in the development of standards.

- **Inclusive.** Anyone in the world can participate in developing IEEE standards, and IEEE makes an effort to reach out to both individuals and entities in developing countries. Participants in developing countries are encouraged to engage electronically in the development of IEEE standards by, for example, submitting comments during a formal consensus ballot without extensive or long-distance travel.